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*                U N I V E R S I T Y   O F   U T A H            *
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*     C O M P U T E R   S C I E N C E   D E P A R T M E N T     *
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MONDAY 11/10/80 AT 05:02:50 PM

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L      EEEE PPPP  RRRR   EEEE  AAA  U   U
L     E     P   P R   R E     A   A U   U
L     E     P   P R   R E     A   A U   U
L     EEEE  PPPP  RRRR  EEEE  AAAAA U   U
L     E     P     R R   E     A   A U   U
L     E     P     R  R  E     A   A U   U
LLLL  EEEE P     R   R  EEEE A   A  UUU

PPPP   CCC   CCC         M M   AAA  IIIII L          TTTTT X   X TTTTT         1
P   P C   C C   C        M M M A   A   I   L            T   X   X   T          11
P   P C     C            M M M A   A   I   L            T    X X    T          1
PPPP  C     C            M M M AAAAA   I   L            T     X     T          1
P     C     C            M   M A   A   I   L            T    X X    T          1
P     C   C C   C        M   M A   A   I   L      ..    T   X   X   T    ..    1
P      CCC   CCC         M   M A   A IIIII LLLLL ..    T   X   X   T    ..   111
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18-Jun-80 13:02:59-MDT,000007 33;000000000003
Date: 18 Jun 1980 1302-MDT
From: GRISS
Subject: [bart at CIT-11: re: pcc and dec-20]
To: frank, lepREAU

I have made contact with Steve Johnson.
M

Mail from CIT-11 rcvd at 18-Jun-80 0959-MDT
Date: 18 Jun 1980 at 0848-PDT
From: bart at CIT-11
Subject: re: pcc and dec-20
To: griss at utah-20
cc: scj,erik,bart

There are folk here that are also interested in C for DEC-20s, and would
probably like to ftp Snyder's contraption from your machine. Hence the CC
to Erik...

SCJ can be reached at odd times at x1807 (my office) or hunted down through
x2841 (department) or x2848 (laboratory). He has your phone number also.

-Bart

10-Jul-80 11:41:49-MDT,000001336;000000000003
Date: 10 Jul 1980 1141-MDT
From: GRISS
Subject: [scj at CIT-11: pcc and dec-20]
To: lepREAU

Mail from CIT-11 rcvd at 18-Jun-80 1639-MDT
Date: 18 Jun 1980 at 1518-PDT
From: scj at CIT-11
Subject: pcc and dec-20
To: griss at utah-20
cc: bart

the 20 has a few problems with C (or vice versa); the main problem
is dealing with the notion of byte pointers. A secondary problem is
dealing with difficulties because writing out all 5 bytes in an
integer is not sufficient to write out the integer. I assume that
Snyder did this already and it could be simply copied. Ditto with the
calling sequence issue. The way to find abcut the calling sequence
thing is to write me at BTL (room 2C-559, Bell Labs, Murray Hill, NJ,
07974) and I'll put you on our Computer Science Tech. Report Series.
The Calling sequence paper is being revised and will be made public
shortly. Bart's algorithms for reaching me at Caltech are valid
and I ssould be around for the next few days (thru fri). ¬N Next week I'll
be back at BTL, 201-582-3968. I feel a bit badly about using Barts
Phone here, so would rather you called me this well, or I'll call
you next week. Tell me about the Burroghs 1800. I thought Thoth was
the official portable system for that company...
Steve

14-Jul-80 13:56:22-MDT,000000381;000000000003

Date: 14 Jul 1980 1356-MDT
From: LEPREAU
Subject: Re: Unix C and DEC 20 C Differences
To: HARRIS
cc: lepREAU
In-Reply-To: Your message of 14-Jul-80 0935-MDT

Doc:c-differences.mem has it with underlines, etc.
<lepreau.pcc>c-dif.crt is the same thing but easier to peruse on the screen.
HELP C is useful, and tells about some significant i/o library differences.

25-Jul-80 13:13:11-MDT,000000231;000000000003
Date: 25 Jul 1980 1313-MDT
From: GRISS
Subject: B1800 Unix
To: frank
cc: griss, lepREAU

Apparently a version of UNIX (lamost) runs at SUNY Buffalo; they used the
PDP-11 emulator route. Worth checking, I think.
m

 6-Aug-80 10:23:23-MDT,000000000221;000000000003
Date: 6 Aug 1980 1023-MDT
From: SINGLETON
To: LEPREAU
Subject: Call from Kevin Thomas
Organization: Morgan Guaranty
Phone number: (212) 483- 2736

Please return his call within the next two hours.
  ========
12-Aug-80 15:28:45-MDT,533;000000000001
Mail from USC-ISIB rcvd at 12-Aug-80 1528-MDT
Date: 12 Aug 1980 1425-PDT
From: Dave Dyer <DDYER at USC-ISIB>
Subject: Re: C compiler for a TOPS-20
To: THOMAS at UTAH-20
cc: LEPREAU at UTAH-20
In-Reply-To: Your message of 12-Aug-80 1351-PDT

 Sounds good. When finished, what will its availability be?
 Initially, we could use a C-syntax checker (like LINT?) that ran
on tops-20. Is one of those extant?
 Is anyone planning to port all of UNIX onto a KL?

 Anyway, please keep me informed of developments.

14-Aug-80 12:53:37-MDT,828;000000000003
Date: 14 Aug 1980 1253-MDT
From: LEPREAU
Subject: Letter to S.Johnson re BTL memo
To: griss
cc: lepREAU

Could you send this skeletal letter (amended to your taste) to S.Johnson?
This is the route (paper mail) he suggested in his message of 6/18.
Or it could go out under my name, but he's never heard of me.
Thanks.

Steven C. Johnson
Room 2C-559
Bell Laboratories
Murray Hill, NJ 07974

Dear Steve:

Please add me to the distribution list for the "Computer Science Technical Report Series", with the immediate object of obtaining a copy of "The C Language Calling Sequence" by Lesk, Johnson, and Ritchie.
Thank you.

Sincerely yours,

Martin L. Griss
Associate Professor

cc: J. Lepreau

ADDED: sent out 8/21 on CS letterhead. Loretta signed for mlg.
15-Aug-80 15:52:58-MDT,000000441;000000000001
Date: 15 Aug 1980 1552-MDT
From: LEPREAU
Subject: v7 C preprocessor
To: thomas

Like to talk with you sometime about integrating it into the UNSW C--
it's now working stand-alone. See /public/portc/cpp/README for
the author's comments on its features.
Could use it now via: "cpp -P pgm.c pgm.i". If "pgm.i" is omitted, goes
to stdout.
Other undocumented options: -R: allow macro recursion.
-C: don't delete comments.

26-Aug-80 14:39:19-MDT,000000243;000000000003
Date: 26 Aug 1980 1439-MDT
From: LEPREAU
Subject: pcc at Case on Harris/6
To: thomas

Do you know the name(s) of the people there who were
working on it? I'd really like (need) to contact them
and possibly get their version.

26-Aug-80 22:38:18-MDT,000000273;000000000003
Date: 26 Aug 1980 2238-MDT
From: THOMAS
Subject: Re: pcc at Case on Harris/6
To: LEPREAU
In-Reply-To: Your message of 26-Aug-80 1439-MDT

Look at the comments at the beginning of login.c. I think that one
of the guys names is in the changes comments.
-S

29-Aug-80 05:25:03-MDT,00000533;000000000003
Date: 29 Aug 1980 0525-MDT
From: LEPREAU
Subject: Harris/6 pcc info
To: frank, griss
cc: thomas

Good news! On the conferance tape we just got is the /6 compiler
and a 100 page document by its author, which i believe is the
basis for his thesis at Case. Before getting this, I've
tried to get in touch with him for the last 2days....

He says that it has been implemented on "more than a dozen"
machines, including the DEc-10: I'll try to find out where....
(though I have a suspicion it might be at Bell)

28-Aug-80 19:26:07-MDT,00000000364;000000000003
Date: 28 Aug 1980 1926-MDT
From: THOMAS
Subject: pcc for harris/6
To: lepreau

There is a document on the new Usenix conference tape called
"A Detailed Tour Through the /6 Portable C Compiler". Look at
/del/delaware/cwru.v7/pcc/tour/README for more details. If
you login as user 'conf' (password 'erance') you can write on
that directory.
-S

29-Aug-80 09:34:54-MDT,000000221;000000000003
Date: 29 Aug 1980 0934-MDT
From: FRANK
Subject: Re: Harris/6 pcc info
To: LEPREAU, griss
cc: thomas
In-Reply-To: Your message of 29-Aug-80 0525-MDT

It's possible he's talking about the Snyder compiler.

6-Sep-80 05:19:07-MDT,535;000000000003
Date: 6 Sep 1980 0519-MDT
From: LEPREAU
Subject: Snyder's Thesis on (portable) C
To: griss, kessLER, dronGOWSKI

Before I send off to MIT, do you happen to have a copy of it,
or suggest who might. ...thanx

"A Portable Compiler for the Language C",
MS Thesis, MIT '74, Alan C. Snyder.

ADDED: It's MAC TR-149: "slightly obsolete, but still the major piece
of documentation on the compiler".
Docs HIS-6000 (h'well). We should have that
version's source somewhere; see <c.cmp>recipe.text.
6-Sep-80 05:20:20-MDT,00000000268;000000000003
Date: 6 Sep 1980 0520-MDT
From: KESSLER
Subject: Re: Snyder's Thesis on (portable) C

To: LEPREAU
cc: Griss, Drongowski
In-Reply-To: Your message of 6-Sep-80 0519-MDT

Yes, in fact Martin had a bunch duplicated (he may even have some extras).

Bob.

18-Sep-80 13:25:46-MDT,000000322;000000000003
Date: 18 Sep 1980 1325-MDT
From: FRANK
Subject: Re: Case wants Snyder's C
To: LEPREAU
In-Reply-To: Your message of 18-Sep-80 1323-MDT

Unfortunately, Case must sign license agreement with MIT before we
can distribute Snyder's version. Case must contact Elliott Moss at the
MIT Lab for Computer Science.

18-Sep-80 16:25:32-MDT,000001021;000000000003
Date: 18 Sep 1980 1625-MDT
From: FISH
Subject: [KAVEH: C Compiler]
To: Frank, Lepreau, drongOWSKI
cc: kaveh

Got any idea what his problem is? Maybe give him an idea when the PCC will
be around, so he can look forward to forgetting this compiler...

-Russ

Date: 18 Sep 1980 1451-MDT
From: KAVEH
Subject: C Compiler
To: fish

I have some problem with the C Compiler and I was refered to you for advice.
My problem is that I am running a very lorg program (8000 lines) with the C
Compiler but the compilation never terminates. When I hit CONTROL T, it prints

CC fork wait at 61112 used.....

The number 61112 never changes until all of the 15 minutes of CPU time is used.
I will be very thankful if you tell me what causes fork wait and is the problem
in the compiler or my program?

PS: Please refer me to other people if you do not know anything about it.

Thank you
Kaveh Etahinia

26-Sep-80 12:30:24-MDT,000000436;000000000013
Date: 26 Sep 1980 1230-MDT
From: FISH
Subject: [DRONGOWSKI: C compiler]
To: Lepreau

How long, oh Lord?

Date: 26 Sep 1980 1221-MDT
From: DRONGOWSKI
Subject: C compiler
To: fish

Russ:
  The MIT C compiler is hopeless. I think this guy should talk to Randy
in the future. I too am defering any 20-C'ing until the PCC comes up.

paul j

26-Sep-80 13:13:59-MDT,00000000182;000000000003
Date: 26 Sep 1980 1313-MDT
From: LEPREAU
Subject: Re: [DRONGOWSKI: C compiler]
To: FISH
In-Reply-To: Your message of 26-Sep-80 1230-MDT

Too long, oh ye who wait....

10-Oct-80 12:52:35-MDT,00000001136;000000000003
Date: 10 Oct 1980 1252-MDT
From: CS519.HUFFMAN
Subject: PORTABLE C COMPILER
To: LEPREAU

MARTIN GRISS SUGESTED THAT I CONTACT YOU TO FIND OR RATHER GET YOUR OPINION
OF THE DIFFICULTY IN CONVERTING THE PCC TO A MACHINE LIKE THE 8086.
THE MAJOR CONCERNS THAT I HAVE ARE:
    1. IS IT MODULARIZED ENOUGH TO MAKE IT POSSIBLE TO CONCENTRATE THE
        CONVERSION TO ONE OR TWO MODULES. IF NOT HOW MANY?
    2. ARE THE CHANGES RESTRICTED TO JUST THE OUTPUT OF THE COMPILER
        OR ARE THERE LOGIC AND MACHINE OPENDENT CHANGES TO BE MADE ALSO?
        IF SO HAVE THEY BEEN EXTREME OR MINIMAL IN YOUR PROJECT?
    3. IF A PERSON HAD A PATTERN TO FOLLOW SUCH AS YOURS, WHAT WOULD BE THE
        TIME REQUIREMENTS TO COMPLETE A PROJECT SUCH AS THIS?
I'M CONCERNED ABOUT THIS BECAUSE I'M PART OF A GROUP PROJECT THAT IS TRYING
TO IMPLEMENT A C COMPILER ON THE 8086. THE DECISION MUST BE MADE AS TO
WHICH COMPILER WE SHOULD USE. WE HAVE A TINY C BUT IT IS QUITE LIMITED
SO WE WANTED TO LOOK AT SOMETHING BIGGER. I APPRECIATE ANY HELP YOU WILL BE
ABLE TO GIVE.
                                        THANKS KEN HUFFMAN

14-Oct-80 01:57:20-MDT,00001283;000000000003
Date: 14 Oct 1980 0157-MDT
From: LEPREAU
Subject: Re: PORTABLE C COMPILER
To: CS519.HUFFMAN
cc: griss, CS519.HEMMING, CS519.HEWITT
In-Reply-To: Your message of 10-Oct-80 1252-MDT

1. Very modularized, but still have to convert a lot of files: at the very
minimum 8.
2. Extreme logic and mach. dep. changes to make if target architecture is

weird, and considerable in any case.
Note that pcc does NOT produce code for some abstract machine, allowing
you to just tanslate that.
3. A good 8086 pcc is way too much for a term project, but it is comceivable
that a crummy version could be had based on the Harris /6 pcc that i have
(developed at Case). Depends on how similar the machines' idiosyncrasies
are-- i can't remember the 8086 well enuf to tell you now.
But this is unlikely-- pcc is 8000 lines of usually very obscure C code, which
i am just getting a real handle on after several months, lots of which you
must understand.

I was in the 8086 grp spring qtr and from our experinces then would recommend
a modest project.
i'd be glad to talk to you sometime though, and point you to the paper on pcc.
My approx. schedule is in my finger.plan file.
i'm also interested in pcc for the 8086, thcugh bell labs is sposed to already
have done one.

14-Oct-80 06:26:55-MDT,00000691;000000000003
Date: 14 Oct 1980 0626-MDT
From: CS519.HUFFMAN
Subject: Re: PORTABLE C COMPILER
To: LEPREAU
In-Reply-To: Your message of 14-Oct-80 0157-MDT

THANKS FOR YOUR HELP. YOU HAVE CONFIRMED WHAT I WAS ALREADY BEGINNING TO
SUSPECT. AFTER DIGGING THROUGH THE MEAGER DOCUMENTATION THAT BELL LABS
GAVE ME ON THE IBM 'C' COMPILER AND THE VERY LACKING COMMENTS IN THE
COMPILER ITSELF , I KNOW WHAT YOU ARE SAYING. I'VE BEEN WORKING ON THE IBM
VERSION FOR A YEAR NOW AND I'M NOT SURE THAT I KNOW ANYTHING YET. IT LOOKS
LIKE FOR OUR PROJECT RIGHT NOW TINY 'C' IS GOING TO HAVE TO DO.
THANKS AGAIN FOR YOUR HELP,
KEN HUFFMAN

14-Oct-80 12:02:52-MDT,00000000241;000000000003
Date: 14 Oct 1980 1202-MDT
From: LEPREAU
Subject: Re: PORTABLE C COMPILER
To: CS519.HUFFMAN
In-Reply-To: Your message of 14-Oct-80 0626-MDT

i'd like to see whatever you've got on the 370 compiler, little
as it may be.
-J

16-Oct-80 09:30:21-MDT,00000000526;000000000013
Date: 16 Oct 1980 0930-MDT
From: CS519.HUFFMAN
Subject: Re: PORTABLE C COMPILER
To: LEPREAU
In-Reply-To: Your message of 14-Oct-80 1202-MDT

I WILL RUN YOU OFF A COPY OF THE DOCUMENTATION I HAVE . THE PROGRAM ITSELF IS
CLASSIFIED UNDER PROPRIETARY INFORMATION. IN OTHER WORDS I'M NOT SUPPOSED TO
GIVE IT OUT WITH OUT PERMISSION. SOMETIMES FORGIVENESS IS EASIER TO GET THAN
PERMISSION SO IF YOU WANT MORE WE'LL DISCUSS THAT WHEN. SEND ME A MESSAGE ON
WHERE TO LEAVE THE DOCUMENTATION. KEN HUFFMAN

16-Oct-80 15:11:11-MDT,00000832;000000000003
Date: 16 Oct 1980 1511-MDT

From: LEPREAU
Subject: Re: PORTABLE C COMPILER
To: CS519.HUFFMAN
In-Reply-To: Your message of 16-Oct-80 0930-MDT

I'd forgotten you're the one that Scott said worked for Ma Bell....
The only use (but it would be quite useful) i'd have for the ibm source
is to compare approaches to various problems in the different compilers.
Also, i know the 370 machine better than the harris/6, for example.
I certainly wouldn't need or use it for any ibm machine.... Anyway,
perhaps that could salve your conscience enuf to leak it out. We could
talk sometime after your 519 class if that time is ok with you.

You can leave the doc. on my desk (under the small blackboard) in
3139 MEB, or in my mailbox in 3162.
Thanks a lot. We can get that xeroxing paid for if you want.
-J (x8322)

17-Oct-80 10:56:43-MDT,C0000736;000000000003
Date: 17 Oct 1980 1056-MDT
From: CS519.HUFFMAN
Subject: Re: PORTABLE C COMPILER
To: LEPREAU
In-Reply-To: Your message of 16-Oct-80 1511-MDT

XEROXING IS NOT NECESSARY I JUST RUN IT OUT OF A LIBRARY ON OUR MACHINE.
MY MAIN PROBLEM XM IS NOT SO MUCH CONSCIENCE AS IT IS BEING REPRIMANDED
FOR LETTING IT OUT.
  I DONT KNOW WHY IT'S CLASSIFIED OTHER THAN IT'S UNIQUE AND SOMEONE
MIGHT WANT TO STEAL IT FOR MONETARY GAIN. I'M THE ONLY ONE IN MOUTAIN
BELL WHO HAS A COPY SO IT WOULDN'T BE TOO HARD TO TRACE IT. IF YOU WANT TO
SEE THE C LISTING OF THE COMPILER ILL BRING IT WITH ME TO CLASS MONDAY.
AS FOR ANOTHER COPY FLOATING AROUND WE'LL HAVE TO DISCUSS SOME KIND
OF ARRANGEMENT SO I'LL BE ABLE TO PROTECT MYSELF. KLH

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